

# ITS FIELD OPERATIONAL TEST SUMMARY

U.S. Department  
of Transportation

**Federal Highway  
Administration**

Research and Development

Turner-Fairbank Highway  
Research Center  
6300 Georgetown Pike  
McLean, Virginia 22101-2286

## AUTOMATED MILEAGE AND STATE LINE CROSSING OPERATIONAL TEST (AMASCOT)

### Introduction

AMASCOT demonstrated and evaluated the feasibility of automating the collection of mileage-by-jurisdiction data and electronic data interchange for International Fuel Tax Agreement (IFTA) and International Registration Plan (IRP) reporting. The test involved the states of Iowa, Minnesota and Wisconsin and motor carriers from the three states. 30 interstate commercial vehicles were equipped with prototype electronic mileage-by-jurisdiction data collection devices and collected mileage data as they operated throughout the United States and Canada during normal transport operations. The test also investigated the feasibility of transmitting IFTA and IRP reporting data electronically from the motor carrier to the base jurisdiction.

### Purpose

The specific objectives of the test were:

- Ensure the automated mileage and stateline data collection and submittal system accommodates state auditing guidelines
- Develop procedures and software to electronically submit the fuel use and apportioned mileage report to the base-state jurisdiction
- Test and evaluate the technology to determine requirements necessary to support state auditing guidelines and electronic submittal to base-state jurisdictions
- Conduct an analysis of user acceptance and the benefits and costs of employing the technology for both motor carriers and states

- Conduct a technology transfer program to include workshops, a newsletter and presentations at professional and industry meetings.

### Relevance to the National ITS Goals

The AMASCOT project falls under the CVO Administrative Processes User Service, which is intended to reduce the time and paperwork necessary for motor carriers to comply with and states to administer the regulatory processes for vehicle licensing, permitting and fuel tax filing, thus enhancing the productivity of motor carriers and states. The AMASCOT project specifically focused on the administrative processes related to IFTA and IRP mileage record keeping and filing requirements.

### Methodology

To demonstrate and evaluate the feasibility of automating both the collection of mileage data and the filing of the reports required for motor carrier registration and fuel tax apportionment, the basic test design was to install and operate prototype, automated mileage data collection equipment developed by Rockwell, International Corp. on 30 trucks-five trucks from each of the six participating motor carriers, with two carriers from each of the states-Iowa, Minnesota and Wisconsin.

The following program steps were implemented to complete the project:

- Prototype development, testing and manufacturing
- Motor carrier recruitment
- Equipment installation

- Equipment and data processing beta test
- Data collection, processing and archiving
- Evaluation of the prototype equipment and the project
- Technology transfer.

Figure 1 provides an illustration of the test configuration:

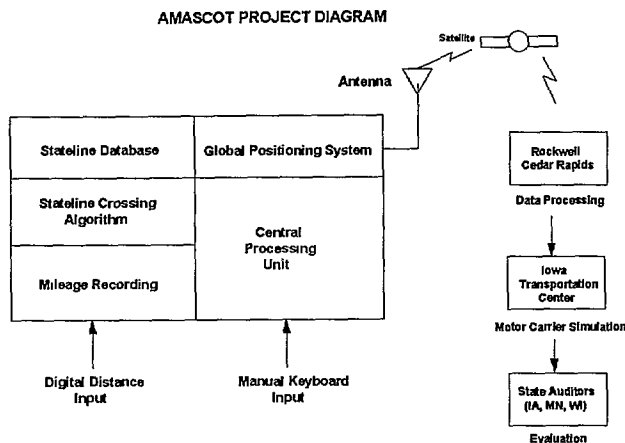


Figure 1. AMASCOT Test Configuration

## Results

The evaluation encompassed three major areas—truck system and electronic data interchange (EDI), state agency costs, benefits and acceptance, and motor carrier acceptance and benefits. The following are the summaries of each area from the Final Evaluation Report

- **Summary of Truck System and EDI Evaluation**—the following were achieved
  - Determined modification to IFTA and IRP procedures necessary to accommodate electronic mileage data collection
  - Evaluated the feasibility of using currently available communications and database software for electronically submitting IFTA and IRP reports to base states
  - Determined the acceptability of the data provided by the truck system
- **Summary of State Costs, Benefits and Acceptance**—the following were achieved
  - Document current processes and costs of IFTA and IRP processing and auditing administration and identify possible impacts of automated data

- collection and electronic filing on these processes and costs
- Determine participating states' acceptance of the automated method and their willingness to change the method of processing
- Document legal and institutional issues related to automated data collection and electronic filing for IFTA and IRP
- **Summary of Motor Carrier Benefits and Acceptance**
  - Participating carriers found excellent correlation between AMASCOT data and mileage and route data collected by drivers
  - Carriers agreed that significant benefits could be available through automated mileage and route data for IFTA/IRP compliance
  - Carriers identified privacy issues associated with electronic mileage and route data, particularly related to limiting use of, and access to their data

Evaluator—Center for Transportation Research and Education (CTRE)—Iowa State University

## Future Application

This type of system is known to be currently marketed and sold by several providers, as part of a more comprehensive, automated in-vehicle administrative support system. There is no reason to doubt that this type of system will be commonplace in trucking operations in North America by the turn of the century.

## References

AMASCOT: Automated Mileage and Stateline Crossing Operational Test Final Report, Center for Transportation and Research Education, Iowa State University, May, 1996

AMASCOT Project Completion Plan, Booz·Allen & Hamilton Inc. Nov 1995